

CLAIMS

1. A coupling structure of side and cross members, comprising:

5 a side member having a vertical wall and being disposed along a longitudinal direction of a vehicle body;

a component fixed to an outer surface of the vertical wall of the side member in a vehicle transverse direction by use of attachment members penetrating the vertical wall;

10 a cross member having a side wall, an upper wall extending from an upper end of the side wall, and a lower wall extending from a lower end of the side wall, the cross member being disposed along the vehicle transverse direction; and

15 a gusset having a vertical plate fixed to the vertical wall of the side member, an upper horizontal plate that extends inward in the vehicle transverse direction from an upper end of the vertical plate and is fixed to the upper wall of the cross member, and a lower horizontal plate that extends inward in the vehicle transverse direction from a lower end of the vertical plate and is fixed to the lower wall of the cross member, the gusset coupling an end of the cross member in the vehicle transverse direction with the side member,

20 wherein the vertical plate of the gusset has ribs protruding inward in the vehicle transverse direction,

the ribs form and define recessed parts on an outer surface of the vertical plate in the vehicle transverse direction, and

25 parts of the attachment members, which project from an inner surface of the vertical wall of the side member in the vehicle transverse direction, are housed in the recessed parts and therefore the vertical plate of the gusset is fixed in a state of coming into surface contact with the inner surface of the vertical wall of the

side member in the vehicle transverse direction.

2. The coupling structure according to claim 1, wherein

the side member includes a horizontal wall extending inward in the vehicle
5 transverse direction from one of upper and lower ends of the vertical wall and
facing one of the upper and lower horizontal plates of the gusset,

the component is fixed to the horizontal wall of the side member by use of
second attachment members penetrating the horizontal wall,

the one of the upper and lower horizontal plates of the gusset has second
10 ribs protruding in an opposite direction to the horizontal wall,

the second ribs form and define second recessed parts on a surface facing
the horizontal wall, and

in a state where the gusset is fixed to the side member, interference
between the one of the upper and lower horizontal plates of the gusset and parts of
15 the second attachment members projecting toward the one of the upper and lower
horizontal plates from the horizontal wall of the side member, is avoided by the
second recessed parts.

3. The coupling structure according to claim 2, wherein the ribs in the vertical
20 plate of the gusset are joined with the second ribs in the horizontal plate.

4. The coupling structure according to one of claims 1 and 2, wherein the
component is a leaf spring bracket.